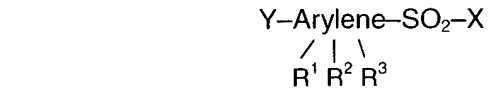
CLAIMS

What is claimed is:

1. A sulfonyl halide of the general formula (I)



Formula (I)

wherein Arylene designates a carbocyclic or heterocyclic, aromatic ring system comprising 1–3 rings;
R^1, R^2 and R^3 are, independently, hydrogen, $C_{1\text{-}6}$alkyl, $C_{1\text{-}6}$alkoxy, halogen, nitro, cyano or phenyl;
X is fluoro, chloro or bromo; and
Y is a boroxine moiety attached *via* a bond from Arylene to one of the boron atoms of a boroxine ring which ring has a group of the formula –Arylene(R^1)(R^2)(R^3)SO_2X, wherein Arylene, R^1, R^2, R^3 and X are as defined above, at each of the other two boron atoms of the boroxine ring, or Y is a boronic acid group or a boronic ester group.

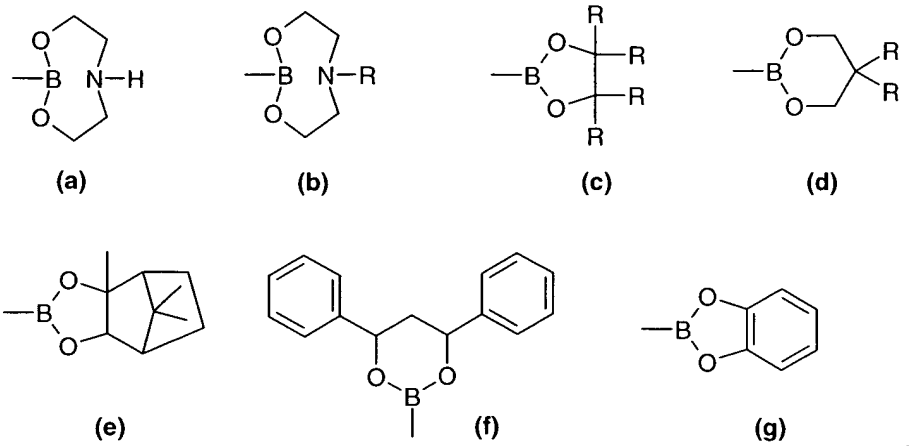
2. A compound according to claim 1 wherein Arylene is 1,4-phenylene, 1,3-phenylene or 1,2-phenylene.

3. A compound according to claim 1 wherein R^1, R^2 and R^3 are hydrogen.

4. A compound according to claim 1 wherein X is chloro.

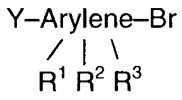
5. A compound according to claim 1 wherein Y is a boronic acid group.

6. A compound according to claim 1 wherein Y is a boronic ester group selected among the options (a) – (g) below wherein the substituent R, when present, is selected from the group consisting of methyl, ethyl, propyl, isopropyl, butyl, isobutyl, *tert*-butyl and phenyl



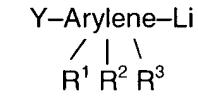
7. A method of providing a compound of formula (I) which comprises the following steps:

a) reacting a compound of formula (II):



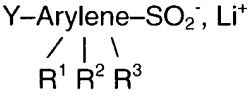
Formula (II)

wherein R^1, R^2, R^3 and Y are as defined in claim 1, in an inert solvent at a temperature below -75 °C with butyl lithium to form a lithiated intermediate of formula (III):



Formula (III);

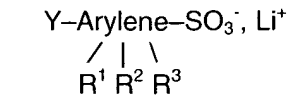
b) adding sulfur dioxide to the lithiated intermediate of formula (III) to form the corresponding lithium sulfinate of formula (IV):



Formula (IV);

and converting the lithium sulfinate of formula (IV) to the corresponding sulfonylchloride of formula (I) by treating the lithium sulfinate with *N*-chlorosuccinimide or 1,3-dichloro-5,5-dimethylhydantoin or converting the lithium sulfinate of formula (IV) to the corresponding sulfonylbromide of formula (I) by treating the lithium sulfinate with *N*-bromosuccinimide; or

c) adding sulfur trioxide to the lithiated intermediate of formula (III) to form the corresponding lithium sulfonate of formula (V):



Formula (V);

and converting the lithium sulfonate of formula (V) to the corresponding sulfonylflouride of formula (I) by treating the lithium sulfonate with sulfur tetrafluoride or diethylamino sulfur trifluoride or to the corresponding sulfonylchloride of formula (I) by treating the lithium sulfonate with thionyl chloride, sulfuryl chloride, phosphortrichloride, phosphorpentachloride or phosphoroxychloride.

8. A method according to claim 7 wherein the inert solvent used in step a) is selected from the group of solvents comprising tetrahydrofuran, diethylether, dioxane in mixture with a solvent having a low freezing point, diglyme, *tert*-butyl-methylether, di-*tert*-butylether, tetrahydropyran, and mixtures thereof.

9. A method according to claim 7 wherein the temperature at which step a) is carried out is between -75 °C and -150 °C.

10. A method according to claim 7 wherein a lithium sulfinate of formula (IV) is converted into the corresponding sulfonylfluoride of formula (I) by treating the lithium sulfinate with sulfur tetrafluoride or diethylamino sulfur trifluoride.

11. A method according to claim 7 wherein a lithium sulfinate of formula (IV) is converted into the corresponding sulfonylchloride of formula (I) by treating the lithium sulfinate with N-chlorosuccinimide or 1,3-dichloro-5,5-dimethylhydantoin.

12, A method according to claim 7 wherein a lithium sulfonate of formula (V) is converted into the corresponding sulfonylchloride of formula (I) by treating the lithium sulfonate of formula (V) with thionyl chloride, sulfuryl chloride, phosphortrichloride, phosphorpentachloride or phosphoroxychloride.

13. A method according to claim 7 wherein a lithium sulfinate of formula (IV) is converted into the corresponding sulfonylbromide of formula (I) by treating the lithium sulfinate with N-bromosuccinimide.